

N O T I C E

THIS DOCUMENT HAS BEEN REPRODUCED FROM
MICROFICHE. ALTHOUGH IT IS RECOGNIZED THAT
CERTAIN PORTIONS ARE ILLEGIBLE, IT IS BEING RELEASED
IN THE INTEREST OF MAKING AVAILABLE AS MUCH
INFORMATION AS POSSIBLE

"Made available under NASA sponsorship
in the interest of early and wide dis-
semination of Earth Resources Survey
Program information and without liability
for any use made thereof."

80-10186
JSC-12963

NASA CR-

160682

LACIE/PHASE III ADJUSTABLE CROP CALENDAR (ACC)

CONFIGURATION CONTROL PROCEDURES MANUAL

Job Order 74-963

AD-63-1347-4963-11

(E80-10186) LACIE/PHASE 3 ADJUSTABLE CROP
CALENDAR (ACC) CONFIGURATION CONTROL
PROCEDURES MANUAL (Lockheed Electronics Co.)
16 p HC A02/MP A01

N80-28786

CSCL 05B

G3/43 00186
Unclas

Prepared By

Lockheed Electronics Company, Inc.
Systems and Services Division
Houston, Texas

Contract NAS 9-15200

For

EARTH OBSERVATIONS DIVISION
SPACE AND LIFE SCIENCES DIRECTORATE



National Aeronautics and Space Administration
LYNDON B. JOHNSON SPACE CENTER

Houston, Texas

June 1977

LEC-10800



LACIE/PHASE III ADJUSTABLE CROP CALENDAR (ACC)
CONFIGURATION CONTROL PROCEDURES MANUAL

Job Order 74-963
AD-63-1347-4963-11

PREPARED BY

K. Williams

APPROVED BY


F.L. Krumm, Supervisor
Software Development Section

Prepared By

Lockheed Electronics Company, Inc.

For

Earth Observations Division

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
LYNDON B. JOHNSON SPACE CENTER
HOUSTON, TEXAS

June 1977

LEC-10800

CONTENTS

Section	Page
1.0 PURPOSE	1-1
2.0 SCOPE.	2-1
3.0 APPLICABLE DOCUMENTS.	3-1
4.0 REQUEST FOR EXPERIMENT CHANGE PROPOSAL.	4-1
4.1 GENERAL INSTRUCTIONS	4-1
4.2 SUBMITTAL,	4-1
4.3 RECP PROCESSING.	4-1
5.0 PROCEDURAL REQUIREMENTS.	5-1
5.1 RESPONSIBILITIES	5-1
5.1.1 OPERATOR OF THE ACC MODEL	5-1
5.1.2 CCEA COMPUTER SPECIALIST	5-2
5.1.3 CCEA DIRECTOR	5-2
5.2 INSTRUCTIONS FOR FILLING OUT RECP FORMS.	5-2
5.2.1 GENERAL INSTRUCTIONS.	5-2
5.2.2 SPECIFIC INSTRUCTIONS	5-3
APPENDIX A EXAMPLE OF RECP FORM	A-1
APPENDIX B EXAMPLE OF CROP CALENDAR RECP LOG.	B-1

1.0 PURPOSE

The purpose of this document is to provide an orderly manner by which discrepancies or necessary changes to the Adjustable Crop Calendar (ACC) encountered by the ACC operators at CCEA/Columbia can be relayed to the LACIE Level 3 Configuration Control Board.

2.0 SCOPE

The instructions contained herein apply to the use of Request for Experimental Change Proposal (RECP) forms to support the Adjustable Crop Calendar (ACC) model operations.

~~2-1~~

2

3.0 APPLICABLE DOCUMENTS

- Action Documentation 63-1347-4963-11
- "As-Built" Design Specifications for the Yield Estimation Subsystem (YES) Operational Robertson Phenological Model (JSC-12941/LEC-10743)
- LACIE Level 3 Change Control Procedures Manual (LACIE-D-75-02-001)

4.0 REQUEST FOR EXPERIMENTAL CHANGE PROPOSAL

4.1 General Instructions

A Request for Experiment Change Proposal (RECP) will be prepared for any proposed changes to the ACC baseline document using the format illustrated in Appendix A. An entry will be made in each block. When a block cannot be completely filled out or when information is unknown, a statement to that effect will be entered on the form. The RECP will also be entered into the Crop Calendar RECP log illustrated in Appendix B.

4.2 Submittal

The original copy of the completed RECP, along with the assembled data package, will be submitted to the CCB recording secretary at least 2 weeks before the next scheduled CCB meeting.

4.3 RECP Processing

The CCB recording secretary, in conjunction with the executive secretary and the CCB chairman, is responsible for coordinating and processing all RECP's received. Processing will be accomplished in accordance with the procedures contained in Sections 5.5 and 5.6 of the LACIE Level 3 Change Control Procedures Manual (LACIE-D-75-02-001). Specific instructions for initiation of proposed changes and for filling out the RECP form are contained in Section 5.2.

5.0 PROCEDURAL REQUIREMENTS

5.1 Responsibilities

Responsibilities for the initiation and closure of RECP forms shall be described in the following paragraphs.

5.1.1 Operator of the ACC Model

- a. Upon observing a discrepancy or inconsistency in a documented ACC program or subroutine, notify the CCEA computer specialist. It is imperative that the problem be reported immediately, prior to the operator departing the operational area. Later reporting results in erroneous data because of oversights and also results in difficulty in recreating the problem.
- b. Identify the program, subroutine, or file containing the problem and determine how long it would take to remedy the situation. Assemble a data package, documenting the problem and potential solutions, obtaining assistance from the CCEA computer specialist if necessary.
- c. If the system discrepancy can be resolved on the spot during the user's time and is found not to require a system update or change, the system operator or the CCEA computer specialist will take corrective action.
- d. If the system discrepancy is found to require a system update or change, the operator must initiate an RECP in accordance with the instructions in Section 5.2 of this document.
- e. Initiate the required change in the discrepant program or subroutine.
- f. Notify the CCEA Director that an RECP has been initiated and inform the Director of the problem and potential solutions.
- g. Enter the RECP into the CCEA Crop Calendar RECP log.
- h. Notify the personnel at JSC using crop calendar output if the problem will result in a delay in output transmittal.

5.1.2 CCEA Computer Specialist

- a. Assist the ACC operator in identifying the problem and potential solutions.
- b. Inform the CCEA Director of the problem in the event that an RECP must be initiated.

5.1.3 CCEA Director

- a. Ensure that the ACC operator initiates the RECP in real-time in accordance with the instructions contained in this document.
- b. Approve of completed RECP form with signature and date on Line 13, SIGNATURE OF SUPERVISOR; NAME/DATE.

5.2 Instructions for Filling Out RECP Forms

The purpose of this section is to provide instructions for filling out the Request for Experiment Change Proposal (RECP) form. This form is provided to facilitate and control changes to the Adjustable Crop Calendar (ACC) baseline document.

5.2.1 General Instructions

- a. All changes to the ACC baseline document, "As-Built" Design Specification for the Yield Estimation Subsystem Operational Robertson Phenological Model (JSC-12941/LEC-10743), must be properly documented and defined on the LACIE RECP form (Appendix A) or in the data package accompanying the proposed change. The request for change will be evaluated, coordinated, screened, and reviewed by the ACC operator, the CCEA/Columbia computer specialist, and the CCEA Director before submission of the original to the CB for disposition.
- b. If the information required by the form is adequately provided in the data package, the information need not be restated on the form itself, but a reference to the appropriate backup document and paragraph will be provided. If the information requested by a block on the form is not known, that fact will be noted on the form.

- c. An entry will be made in each line and block of the RECP form where information is requested. If a line or block is not applicable, "NA" will be inserted. If additional space is required, additional pages will be added and the location of the items on these additional pages will be referenced in the applicable line or block of the RECP form. These additional pages will be numbered consecutively and will include the name of the originating organization (NOAA/CCEA/Columbia) and the LACIE element nomenclature (YES/Automated Crop Calendar (ACC)).
- d. When the originator (ACC operator) has completed the RECP form and data package accompanying the change request and the RECP has been signed by the CCEA Director, the entire document will be transmitted to the recording secretary of the LACIE Level 3 CCB. The recording secretary will distribute copies of the proposed change to all LACIE elements affected by the change for review and impact evaluation as required. The RECP and all backup data should be provided to the recording secretary at least 2 weeks before board action is required.

5.2.2 Specific Instructions

5.2.2.1 Line 1 - heading

- a. RECP number (pages 1 and 2) - The RECP number is inserted by the LACIE Level 3 CCB recording secretary upon receipt of the RECP. Once an RECP number is assigned to the first submission of an RECP, that number will be retained for any revisions or corrections of that RECP. Numbers assigned to RECP's which are finally disapproved will not be reused. CCEA/Columbia may assign its own RECP number for internal tracking above the RECP number block.
- b. Date (pages 1 and 2) - The date is inserted by the LACIE Level 3 recording secretary upon receipt of the RECP. If a revision to the RECP is submitted, the original date will be replaced with the date the revision is again received by the recording secretary.

5.2.2.2 Line 2

- a. Originating organization - The name of the organization

submitting the RECP will be entered (CCEA/Columbia).

- b. Requested action - The originator of the RECP will indicate the action being requested by checking the appropriate square. A document change only or an impact assessment only may be indicated as the requested action. A document change and an impact assessment may also be indicated as the requested action.

5.2.2.3 Line 3

- a. LACIE element nomenclature - YES/Adjustable Crop Calendar.
- b. Need date - Indicate the date by which the change must be implemented to satisfy the recommended effectivity.

5.2.2.4 Line 4 - change title. The change title is as brief a statement as possible by which the change can be recognized.

5.2.2.5 Line 5 - description of change. The description of the change includes a detailed statement of the proposed change including a reference to the paragraph(s) of the ACC baseline document (JSC-12941/LEC-10743) where the present requirement can be found. The change should be described in definitive language, in sufficient detail to allow ready identification and evaluation and to permit a thorough understanding of the subject matter by those reviewing it.

5.2.2.6 Line 6

- a. Document number - JSC-12941/LEC-10743.
- b. Page number - Identify the page number(s) of the document(s) to be changed.
- c. Paragraph - Identify the paragraph number(s) of the document(s) to be changed.

5.2.2.7 Line 7 - change from/to. Indicate the words of the requirement as it now reads and then specify the exact wording required for the change. The entire paragraph need not be included; however, sufficient repetition should be made to permit a complete understanding of the change.

5.2.2.8 Line 8 - justification. Justification for the proposed change will contain a comprehensive definition of the problem which the change proposes to correct or of the new capability which the change proposes to provide. When the proposed change is directed toward providing a new capability, the improvements and benefits to be derived should be specifically identified.

5.2.2.9 Line 9 - effectivities (LACIE phase and/or subphase). The Adjustable Crop Calendar System is part of LACIE Phase III.

5.2.2.10 Line 10 - effect of change on. If the incorporation of the proposed change will affect the experiment design or operations of the ACC, the effect of the change on each of the LACIE elements indicated should be identified by inserting attachment numbers in the appropriate boxes. The effects, both advantageous and disadvantageous, will be explained fully and in appropriate detail in the referenced attachments. "NA" should be inserted in each case where the proposed change does not affect the design or operations.

5.2.2.11 Line 11 - impact on LACIE if this change is disapproved. Identify the impact to the project if this change is not made. Identify the system elements or sub-elements impacted and the magnitude and reason for schedule changes, if appropriate. Identify resources, requirements, impacts, and estimated increase or decrease in costs, facilities, or staffing.

5.2.2.12 Line 12 - remarks. Provide any other information pertaining to the change that should be considered when evaluating and dispositioning the change. Particular emphasis should be placed on those areas of the change that would result in substantial cost saving without compromising experiment reliability or performance capabilities. To facilitate action on RECP's which are time critical, this block may also be used for concurrences of affected LACIE subsystem managers and/or implementing organizations.

5.2.2.13 Line 13 - approvals

- a. Signature of originator and date - Enter the signature of the ACC operator and the date the RECP was submitted to the CCEA Director for concurrence.

- b. Signature of supervisor and date - Enter the signature of the CCEA Director or his designated alternate. The signature indicates concurrence with the RECP. The date is the date the RECP is signed and forwarded to the CCB.
- c. Signature of the chairman, LACIE Level 3 CCB - approved or disapproved - The signature of the chairman or his designee.

1	RECP number	LARGE AREA CRGP INVENTORY EXPERIMENT REQUEST FOR EXPERIMENT CHANGE PROPOSAL		Date
2	Originating organization		Requested action <input type="checkbox"/> Document change <input type="checkbox"/> Impact assessment	
3	LACIE element nomenclature			Need date
4	Change title			
5	Description of change			
	EXPERIMENT CHANGE			
6	Document number	Page number	Paragraph	
7	Change from/to			
8	Justification			
9	Effectivities (LACIE phase and/or subphase)			

RECP number	LARGE AREA CROP INVENTORY EXPERIMENT REQUEST FOR EXPERIMENT CHANGE PROPOSAL				Date
EFFECT OF CHANGE ON					
	Design	Operations		Design	Operations
DAPTS-ERTS			ISRRS-ADP		
DAPTS-Field			ISRRS-Non-ADP		
DAPTS-Hist. Aq.			SPE-EA		
DAPTS-RT Met.			SPE-RI		
DAPTS-Hist. Met.			IE		
CAMS			Research		
YES			Test and evaluation		
CAS			Others		
Impact on LACIE if this change is disapproved					
Remarks					
APPROVALS					
Signature of Originator Date			Signature of Chairman, LACIE Level 3 CCB		
Signature of supervisor Date			<input type="checkbox"/> Approved <input type="checkbox"/> Disapproved		

Appendix B: Crop Calendar RECP Log

RECP NUMBER	DATE OPENED	PROGRAM/ VERSION	TYPE OF PROBLEM	RECP PRIORITY	PROBLEM DESCRIPTION	ACTION TAKEN	STATUS